

**BEFORE THE
IOWA UTILITIES BOARD**

Docket No. SPU-2015-0039

**Black Hills/Iowa Gas Utility Company, LLC
d/b/a Black Hills Energy**

**Prepared Direct Testimony of
Tracy L. Peterson**

Before the Iowa Utilities Board

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Direct Testimony of Tracy L. Peterson

1 **I. Introduction**

2 **Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS, AND**
3 **OCCUPATION.**

4 A. My name is Tracy L. Peterson, and my business address is 1205 SW
5 37th Street, Grimes, Iowa. I am employed by Black Hills/Iowa Gas
6 Utility Company d/b/a Black Hills Energy ("BHE" or "Company") in the
7 position of Operating Vice President.

8 **Q. PLEASE DESCRIBE YOUR QUALIFICATIONS AND EXPERIENCE.**

9 A. I have been employed by BHE in my current position since BHE
10 acquired the Iowa natural gas operations of Aquila, Inc. ("Aquila") in
11 July 2008. Previously, I was employed by Aquila and its predecessor
12 companies for 36 years. I was a field technician for the first 11 years,
13 and was promoted to a manager position in 1991. Subsequently, I
14 worked as a local office manager, a state operations manager, a
15 central services manager, a call center manager and director of Iowa
16 business operations. I was named Iowa Operating Vice President for
17 Aquila in February 2006.

18 **Q. PLEASE DESCRIBE YOUR RESPONSIBILITIES AS OPERATING**
19 **VICE PRESIDENT FOR BHE'S OPERATIONS.**

1 A. I am responsible for the financial and operational performance of the
2 Company's natural gas utility business in the state of Iowa. I oversee
3 all state operating functions, including gas distribution operations,
4 maintenance, construction, and field customer service. I am also
5 indirectly involved in the oversight of certain other functions that are
6 centralized within BHE that provide support to Iowa operations, which
7 include human resources, gas supply, regulatory affairs, public
8 relations, government affairs, gas engineering, meter shop operations
9 and central services such as the call center function.

10
11 **II. Background**

12 **Q. PLEASE DEFINE THE TERM "FARM TAP" AND EXPLAIN THE**
13 **OWNERSHIP OF FUEL LINE ASSETS DOWNSTREAM OF THE**
14 **INTERSTATE PIPELINE.**

15 A. A "farm tap" is an outlet off an interstate pipeline, consisting of a riser
16 and valve. The interstate pipeline also normally owns above-ground
17 assets above the riser, including several pressure regulators to reduce
18 high pipeline pressure to a lower distribution pressure, and a
19 measurement meter. The end-use customer, often the landowner,
20 normally owns all assets downstream of the pipeline tap assets,
21 including a device to allow odorant (mercaptan) into the natural gas
22 stream, and the fuel line to the premises or facilities where another
23 regulator reduces the pressure and the natural gas is consumed.

1 **Q. WHY DO FARM TAPS EXIST AND WHAT SERVICE OBLIGATIONS**
2 **DOES BHE HAVE TO THESE CUSTOMERS?**

3 A. Farm taps were often granted by interstate pipelines to land owners in
4 return for an easement prior to construction of the pipeline. The uses
5 of natural gas flowing through farm taps vary, including space heating
6 of homes and other buildings, grain drying, fuel for irrigation engines,
7 heating of farm animal enclosures, and other purposes.

8
9 BHE normally owns no assets at the site of farm taps, but does provide
10 services to customers on behalf of Northern Natural Gas (“NNG”),
11 pursuant to a 1987 Farm Tap Services Agreement. The terms of that
12 agreement are summarized below.

13
14 In addition to the service obligations in the 1987 agreement, BHE’s
15 responsibilities related to farm tap service vary by state, depending on
16 the state’s safety standards and regulatory rules. These
17 responsibilities are described below.

18
19 **III. Origin of Farm Taps**

20 **Q. PLEASE SUMMARIZE THE PAST RELATIONSHIP BETWEEN**
21 **NORTHERN NATURAL GAS AND BHE’S PREDECESSORS IN**
22 **INTEREST.**

1 A. Peoples Natural Gas (“PNG”), a legacy or predecessor operator of
2 BHE’s operations in Iowa, was at one time a division of InterNorth.
3 NNG was InterNorth’s interstate pipeline operator, and PNG was
4 responsible for utility distribution services from Texas to Minnesota.
5 The distribution and transmission functions of InterNorth were
6 segregated by FERC Order 636. In 1987, PNG and NNG executed a
7 Farm Tap Services Agreement that moved the sales function for
8 NNG’s farm taps to PNG (and subsequently to BHE). Although other
9 utilities in Iowa serve a small number of farm taps, BHE serves the
10 vast majority of farm taps in Iowa.

11
12 **IV. Farm Tap Services Agreement**

13 **Q. PLEASE SUMMARIZE THE TERMS OF THE FARM TAP SERVICES**
14 **AGREEMENT BETWEEN NNG AND BHE’S PREDECESSORS IN**
15 **INTEREST.**

16 A. On April 1, 1987, NNG and PNG executed an agreement which
17 obligated PNG to: (1) respond to farm tap gas leaks; (2) respond as a
18 third-party contractor to customer needs related to appliance purchase
19 or service, fuel line or irrigation equipment, sales of materials and
20 consultation on installation and repair of customer facilities; (3) service
21 farm tap odorizers and check delivery pressure; (4) record meter
22 readings, bill customers and collect accounts; (5) lock or read farm tap
23 customer meters at NNG’s request; (6) respond to customer requests

1 for appliance relights; (7) total, report and account to NNG for total
2 volumes delivered; (8) initiate requests for new farm tap sales facilities
3 and revisions, and for terminations and removals; and (9) comply with
4 all state regulations. The agreement terminates on May 31, 2017.

5
6 In 1987, PNG served 7,500 residential, small volume, irrigation and
7 crop dryer farm tap customers and right-of-way grantor customers
8 across the NNG system¹. BHE now serves approximately 1,500 farm
9 tap customers in Iowa on the NNG system, about 700 in Kansas and
10 about 700 in Nebraska. BHE serves many more farm tap customers
11 on other pipelines in Kansas and Nebraska, mostly in the western half
12 of each state where natural gas is the preferred source of energy for
13 irrigation engines. The number of farm tap customers has declined
14 over time as farms consolidated and NNG eliminated inactive taps or
15 negotiated with landowners to convert to propane.

16
17 **V. Changes in Safety Standards Changed BHE's Service**

18 **Requirements**

19 **Q. PLEASE SUMMARIZE THE EVOLUTION OF SAFETY STANDARDS**
20 **IMPACTING FARM TAPS IN THE LAST DECADE AND THE**
21 **SAFETY TESTING PROCESS CHANGES BHE HAS MADE AS A**
22 **RESULT OF THAT PROCESS.**

¹ BHE also serves a few farm taps off of the Company's intrastate pipelines, including the Sidney-Tabor-Hamburg line.

- 1 A. Safety standards have changed in Iowa since the Farm Tap Services
2 Agreement was executed. Prior to 2007, BHE was not required to
3 perform regularly scheduled leak tests on farm tap customer owned
4 fuel lines. In 2007, Iowa Utilities Board (“Board”) Staff issued an
5 Advisory on Farm Tap safety testing. In response to that Advisory, in
6 2008, BHE changed its processes and management agreed that:
- 7 • BHE would continue to perform odorometer tests on ten percent
8 of farm tap customers annually;
 - 9 • BHE would use best efforts to perform a partial leak survey on
10 the first 100 yards from any building or riser toward the tap on
11 20 percent of farm tap customer-owned fuel lines annually;
 - 12 • BHE would add two staff positions to perform this work;
 - 13 • When conducting a partial leak survey at each farm tap, a “best
14 effort” would be made to obtain an odorometer test, and
15 literature concerning customer fuel line responsibilities and
16 safety would be left with or for the customer;
 - 17 • Regardless of whether a leak is found or not on the customer
18 fuel line, the technician would leave a note describing the work
19 that was completed along with an explanation of what was
20 found at the location and a suggested remedy;
 - 21 • Each partial leak survey completed on a farm tap customer fuel
22 line would be recorded on an “Iowa Farm Tap Customer Fuel
23 Line Partial Leak Survey” form; and

- Odorometer test results would be analyzed annually by local supervisors, identifying any odorization trends on farm tap customer fuel lines.

This process change included scheduling customer appointments prior to the leak survey and odorometer tests to attempt to determine which buildings have natural gas; where underground fuel lines run; whether the customer knew the age, size or type of line; whether there had been any changes since the line was installed; and whether the customer had suspicions about the quality of the customer's fuel line. The changes also resulted in additional documents being left with the customer, including an inspection report, fuel line safety information, and hazardous condition letter when appropriate. BHE agreed to summarize the results of these tests and problems corrected in an annual report to Board Safety Staff. BHE has performed these tests since 2008.

Q. HAVE YOU DRAWN ANY CONCLUSIONS ABOUT FARM TAP SAFETY?

A. After seven years of testing, I have concluded there are no available records on customer-owned lines to establish the age of fuel lines, the type of material the fuel lines are made of, the location of or maps of customer-owned fuel lines, the maximum allowable operating pressure of customer-owned fuel lines, cathodic protection records, repair or damage records, maintenance records, or extension or changes to the

1 fuel lines. In addition, our experience reflects that a high percentage of
2 the customer-owned fuel lines are not locatable for excavation safety
3 due to a lack of tracer wires, and almost all current farm tap customers
4 have limited knowledge about these lines. BHE's odorometer testing
5 has confirmed that odorization of gas is evident. I believe leak surveys
6 have value and can identify potential hazards, but Company
7 technicians do not know where to survey when a line is not locatable.
8 Most importantly, leaks have been found on pipe materials that did not
9 meet codes or standards.

10 **Q. DOES BHE EXPECT FEDERAL SAFETY STANDARDS**
11 **APPLICABLE TO FARM TAP FUEL LINES TO BECOME MORE**
12 **STRINGENT?**

13 A. Yes.

14 **Q. PLEASE EXPLAIN.**

15 A. On September 15, 2015, the Pipeline and Hazardous Materials
16 Administration ("PHMSA") issued a proposed rule document, titled
17 "Pipeline Safety: Operator Qualification, Cost Recovery, Accident and
18 Incident Notification, and Other Pipeline Safety Proposed Changes²,"
19 that includes a new requirement to inspect farm tap regulators and
20 excess flow valves every three years. This confirms that changes to
21 federal safety standards are likely, including the rules for customer-
22 owned fuel lines.

² PHMSA-2013-0163-0001, pp. 12-14

1 **Q. HAS BHE EXPERIENCED FARM TAP SAFETY INCIDENTS?**

2 A. Several incidents have occurred in the last few years, resulting in
3 catastrophic losses.

4
5 **VI. BHE Farm Taps**

6 **Q. WHERE ARE THE FARM TAPS LOCATED?**

7 A. BHE's farm tap customers are spread across the state in locations that
8 mirror the location of NNG's pipelines. Exhibit TLP-1 provides a map
9 of the NNG pipeline system in the states of Iowa, Nebraska and
10 Kansas showing the location of BHE farm tap customers.

11
12 **VII. BHE's Safety Concerns and Replacement Proposal**

13 **Q. WHAT ISSUES DOES BHE ADDRESS WITH THIS PROPOSAL?**

14 A. BHE management believes now is the time to address and resolve the
15 following issues related to farm taps:

- 16 • Different safety standards are applied to town plant and farm tap
17 customers;
- 18 • Customer-owned fuel lines often have unknown ages and
19 conditions, and cannot always be located with traditional tools
20 due to a lack of tracer wires;
- 21 • Iowa ONE CALL does not register customer-owned lines and
22 consequently is not notified to locate this kind of line;

- 1 • Lack of known material location and construction standards
2 creates risk for BHE employees, customers, third-party
3 excavators and the general public;
- 4 • Since the original right-of-way grantors who granted easements
5 to NNG many years ago are probably no longer living and land
6 parcels have in some cases been subdivided, customer-owned
7 fuel lines sometimes pass through property that is not owned by
8 BHE's customer, thereby creating access issues;
- 9 • Changes to federal and state safety inspection standards have
10 increased the work and cost involved in serving these
11 customers;

12 **Q. PLEASE EXPLAIN WHY FARM TAPS SHOULD NOT SIMPLY BE**
13 **CONVERTED TO PROPANE.**

14 A. BHE believes abandonment of farm taps and conversion to propane is
15 not appropriate. Farm tap customers have contributed to system
16 integrity replacements for decades through General Service rates. The
17 loss of these customers and lower sales volumes implies spreading
18 remaining costs over a smaller pool of customers, which would result
19 in higher rates for remaining ratepayers in the next rate review. If BHE
20 were no longer serving Iowa farm tap customers, approximately
21 \$800,000 of margin would be lost. Allocating this lost revenue to all
22 155,273 current BHE Iowa customers would result in an average \$0.43
23 per month increase in rates.

1 **Q. HAVE YOU CONSIDERED ALTERNATIVES TO REPLACEMENT OF**
2 **UNSAFE CUSTOMER-OWNED FUEL LINES?**

3 A. BHE has considered several alternate solutions to the issues
4 described above, including adoption of a line replacement program
5 similar to the Minnesota program established in the early 1990s. In the
6 Minnesota program, Aquila was required to test farm tap service lines
7 as though they were company assets, and replacement of deficient
8 lines could be performed by the customer using a qualified plumber.
9 BHE is not interested in a similar program for Iowa because: (1) this
10 approach will not identify and replace substandard lines in a
11 reasonable time; (2) continuing customer ownership of the lines means
12 BHE would not have line location data or maintenance records; and (3)
13 the risk of customer changes to the lines without BHE knowledge is not
14 eliminated. All these issues present risks to BHE's technicians and the
15 general public. BHE management believes it is critically important to
16 ensure that all customer-owned fuel lines meet applicable safety
17 standards. BHE believes that the most effective way BHE can ensure
18 the safety of the lines to the greatest possible extent is to own and
19 maintain the lines itself.

20 **Q. ARE THERE OTHER REASONS WHY BHE BELIEVES CUSTOMER**
21 **OWNERSHIP OF THE FUEL LINES SHOULD NOT BE**
22 **CONTINUED?**

1 A. Farm tap customers bear a significant risk of financial loss when leaks
2 are found. Board Docket No. FCU-2011-0028 (C-2010-0051) is an
3 example of a formal complaint initiated by a BHE farm tap customer
4 after a customer-owned fuel line failed, resulting in the loss of a
5 substantial amount of natural gas and a \$15,683 bill. The lost gas was
6 caused by a crack in a PVC plastic pipe. The customer was unable to
7 pay half of the amount due.

8 **Q. WHAT TESTING AND REPLACEMENT PLAN IS THE COMPANY**
9 **PROPOSING?**

10 A. BHE proposes the following plan as set forth in the proposed tariff
11 sheets filed with the Board on November 24, 2015, which have been
12 identified by the Board as TF-2015-0352:

- 13 • Section 1 of the proposed tariff establishes conditions of service
14 that require all farm tap customer-owned fuel lines to comply
15 with:
 - 16 ○ state and federal safety standards,
 - 17 ○ The Conditions for New Service - Rural and Agricultural
18 Service to Right-of-Way Grantors found on Sheet 59, and
 - 19 ○ A mandatory testing program to establish a maximum
20 allowable operating pressure.

21 BHE would not be authorized to serve farm tap customers
22 unless these standards and conditions are met and the lines
23 pass inspection tests every five years.

- 1 • Section 2 mandates safety testing of the customer-owned fuel
- 2 lines.
- 3 • Section 3 authorizes a line replacement program for those fuel
- 4 lines that do not pass the safety test mandated in Section 2.
- 5 • Section 4 establishes both Company and customer liability for
- 6 customer-owned fuel line.

7 **Q. WHAT ARE THE SAFETY STANDARDS YOU MENTION ABOVE**
8 **AND UNDER WHAT AUTHORITY SHOULD THEY BE APPLIED?**

9 A. The state and federal safety standards are incorporated in BHE's
10 Operations and Maintenance Manual, which has been reviewed and
11 approved by the Board. The manual addresses issues such as
12 allowed materials, maximum allowable line pressure, line testing
13 requirements and schedules, odorization, etc.

14 **Q. PLEASE EXPLAIN THE NEW CONDITION OF SERVICE TARIFF**
15 **PROVISION YOU MENTIONED ABOVE.**

16 A. The condition of service provision in the proposed tariff means that
17 BHE could not serve a farm tap customer if the Company found that
18 the fuel line did not meet Board-approved safety standards

19 **Q. WHAT TESTS MUST A CUSTOMER-OWNED FUEL LINE PASS**
20 **FOR BHE TO CONTINUE SERVICE TO THAT CUSTOMER?**

21 A. Under the mandatory testing program proposal, continued natural gas
22 service to farm tap customers will be conditioned upon five tests:

- 1 1. The customer-owned fuel line must pass a maximum allowable
- 2 operating pressure test,
- 3 2. The line must be constructed of materials that meet BHE's
- 4 approved safety standards and O&M requirements approved by the
- 5 Board,
- 6 3. The line must be locatable,
- 7 4. BHE must have access to the property, and
- 8 5. If the line runs across neighboring property, the customer must
- 9 have easements or contractual authority to enter the neighboring
- 10 property sufficient to allow BHE can access its equipment.

11 **Q. HOW WILL CUSTOMERS BENEFIT IF BHE REPLACES OR**

12 **ACCEPTS RESPONSIBILITY FOR A FARM TAP FUEL LINE?**

13 A. If the proposed tariff is approved and the line passes the tests

14 described above, BHE will:

- 15 1. Assume ownership of and liability for the fuel line,
- 16 2. Begin record keeping with respect to line location, material,
- 17 testing and maintenance,
- 18 3. Provide ongoing maintenance on the line, and
- 19 4. Register the line with the Iowa One Call database.

20 **Q. DO YOU INTEND TO REPLACE A LINE IF IT HAS BEEN**

21 **RECENTLY REPLACED BY THE CUSTOMER AND PASSES THE**

22 **TESTS DESCRIBED ABOVE?**

1 A. If the customer can prove the line has been replaced in the prior five
2 years and if the line passes all tests described above, BHE
3 management believes it is appropriate to pay the customer for the
4 existing line rather than spend approximately \$10 per lineal foot to
5 replace it. BHE proposes to purchase these fuel lines at a fixed price
6 of \$5 per lineal foot multiplied by the line length as measured by BHE
7 technicians using tracer location measurements. BHE proposes a fixed
8 amount per lineal foot because BHE expects each line to be unique,
9 and BHE prefers to avoid negotiated pricing that could result in
10 unequal treatment. BHE is open to a higher or lower purchase price
11 per foot of line.

12 **Q. WHAT IF A LINE DOES NOT PASS ANY OF TESTS DESCRIBED**
13 **ABOVE?**

14 A. If the line fails any of the tests described above, BHE will replace the
15 entire line at a time that is mutually acceptable to the customer and
16 BHE.

17 **Q. HOW DOES BHE PROPOSE TO RECOVER THE COSTS OF THIS**
18 **TESTING AND REPLACEMENT PROGRAM?**

19 A. BHE has proposed two alternatives for recovery of the costs of this
20 proposal, as described in the Direct Testimony of BHE witness Robert
21 J. Amdor.

1 **Q. IF A CUSTOMER DOES NOT WANT BHE TO TEST, REPLACE,**
2 **OWN OR MAINTAIN THE FUEL LINE, WHAT OPTIONS WILL BE**
3 **OFFERED?**

4 A. Almost every farm tap customer I have spoken with has complimented
5 BHE for being proactive with respect to improving the safety of the
6 customer's line. However, if a customer prefers not to have BHE take
7 over ownership and maintenance of the customer's line, the customer
8 will have the option to work with NNG to convert to propane.

9 **Q. WHAT DOES BHE INTEND TO DO IF THE BOARD DOES NOT**
10 **APPROVE THIS PROPOSAL?**

11 A. If the Board does not approve the proposed testing and replacement
12 plan, BHE will consider whether to continue servicing NNG's farm tap
13 customers. The proposed plan is intended to eliminate significant risks
14 and improve safety for farm tap owners, the general public, and BHE's
15 employees. BHE is not interested in continuing to serve farm tap
16 customers if the Company cannot materially improve fuel line safety
17 and recover the costs associated with those investments.

18 **Q. WHY HAS BHE INCLUDED ALTERNATIVES IN THIS PROPOSAL?**

19 A. BHE has included several alternatives in this proposal to provide
20 flexibility to the Board regarding cost-sharing by farm tap line owners
21 and the rate impacts on all customers. BHE is also open to addressing
22 other plan features, such as class cost allocations and rate design, in
23 the Company's next rate review. BHE is amenable to reasonable

1 annual reporting requirements to inform the Board of testing and line
2 replacement progress. However, for BHE to move forward with such a
3 large, capital-intensive project, BHE must be assured that the
4 prudence of the investments proposed in this docket will not be subject
5 to challenge in the Company's next rate review, and that the Company
6 will recover its full cost of capital and depreciation associated with the
7 project.

8 **Q. DOES THIS COMPLETE YOUR DIRECT TESTIMONY?**

9 **A. Yes.**